RADIO NARROWBAND ADVISORY GROUP

National Wildfire Coordinating Group

Boise, Idaho

January 27th and 28th, 2004

Advisory Group Members Present:

Stephen M. Jenkins - Advisory Group Chair, USDA/FS, NIFC, Incident Communications Chief
Roger Spaulding - USDI/USFWS, NIFC, Fire Management
Stephen Morris - USDA/FS IRM, R1, Telecommunications Manager
Ron Strong - USDI/BLM/DSC, National Telecommunications Manager
Dave Dalrymple - Utah Division of Forestry, Fire, and State Lands
Andrew Bellcourt - USDI/BIA, NIFC, Fire Operations
Jim Lundsted – Missouri, Telecommunications Manager
Bob Panko – DOI/NPS, Fire Management, Everglades NP

Advisory Group Members Absent:

None

Other Attendees:

Mike Wallace was present in the morning and then relieved by Andrew Bellcourt.
This was an informal meeting with approximately 20 people from fire and aviation as well as numerous TIA-102 (APCO Project 25) radio manufacturers and vendors.

This meeting was held to develop the recommendations for incident communications mode of operations for FY2004 (wideband or narrowband) and to discuss other related issues.

For copies of the agenda, presentations and handouts please see the attached files.

Advisory Group Recommendations:

Incident Communications Mode of Operations – FY2004

- *All fire communications activity (interagency), including initial attack, will be performed in multi-mode if capable however, the mode of operation for IA will be dictated by local infrastructure. Multi-mode permits both analog and digital transmission and reception.*

- *Any federal, state or local entity that does convert their system to digital must keep it in the multi-mode configuration during fire activity.*

- *All radio equipment issued by the National Incident Radio Support Cache will be configured in analog narrowband mode. All resources federal, state, and contracted responding to a project fire with their own radio equipment, will need to have narrowband capable radios.*

- *All FM aviation communications (federal, state and contracted) will be in the analog narrowband mode. This includes Air Guard, Flight Following, and Air to Ground Tactical channels.*

- *Family Radio Service (FRS) and General Mobile Radio Service (GMRS) to include Rhino and other similar model radios are not to be used on incidents - this includes federal, state, and contracted resources.*

- *The advisory group recommends that communications facilities, funded (whole/partial) by the fire program, follow the R-56 standard for construction and maintenance.*

- *Recommend that all MOU's between cooperators be reviewed. Additional statements will be added to ensure beginning 2005 all fire frequencies are authorized for narrowband operations only. All shared fire frequencies are on a non-disclosure basis.*

- *The following 16 standard NAC codes are to be fully implemented by 2006 along with an interagency Talk Group of $0100 (hex) 250 (decimal).*

CTCSS	*Hex Equivalent*
110.9	$455
123.0	$4CE
131.8	$526
136.5	$555
146.2	$5B6
156.7	$61F
167.9	$68F
103.5	$40B
100.0	$3E8
107.2	$430
114.8	$47C
127.3	$4F9
141.3	$585
151.4	$5EA
162.2	$656
192.9	$788

Presentations

HILTON

- Welcome
- Handout: NWCG Adgenda_2004.doc

JENKINS

- Meeting may go to twice a year.

- National wildfire coordination group created in 1998 to meet the narrowband mandate. This group is only here until P25 narrowband is accepted. Fire is looking at going digital by 2008. After that they are looking at going to 6.25 kHz.
- By January 1, 2005 Congress has mandated that all federal land mobile radio operations, including fire, be operating in narrowband mode. We have 11 months left to meet the mandate. Some agencies won't make the 2005 deadline. Those agencies will be allowed to operate, but if there is any interference they must shut down their operations.
- This year the cache is going narrowband.
- Today we will show you that narrowband and wideband work together. There can be problems if systems are not optimized.
- Every year we borrow FM frequencies from other agencies. By going to narrowband there will be more frequencies available to us.

GERMAN

- Topics: Review of the DOI Digital Narrowband Radio Contracts, NIFC's testing, "Fire Certified Radios, and the proposed NAC, Talk Group, and Unit ID standards.
- Presentation/Handouts: DOI Contracts, Testing, Radios & Stamdards.ppt, CTCSS Tone to NAC Conversion shortnote.doc, NAC-Talk Group-Unit ID shortnote.doc, and P25NACPlan1.pdf
- Contract website http://www.blm.gov/natacq/IDIQ.html this site includes radio deficiencies.
- Special Operations in Digital (encrypted P25 digital): 2002 winter Olympics, law enforcement (digital encryption has no loss in range. With analog encryption there is a 50% loss in range)
- Fire Certified Radios: XTS 3000 UHF is no longer used for fire because there is no front panel programming.
- Testing and deficiencies are an ongoing process so if you come up with something new it can be submitted as a deficiency to be corrected.
- New radio software must be tested before use.
- DOI requires 3 years of free software upgrades as part of the digital radio contract. Therefore, the radios may cost more on the DOI contract than through GSA.

QUESTIONS

- Do you see the use of multiple Talk Groups on single repeater in a fire situation? No. This situation may arise in state and local forests but not during incidents.
- Has this been tested? This issue has not been addressed yet because we are not yet in digital mode.

SMITH

- Topics: Interagency aviation transitioning to multimode P25, transitioning to 760 channel VHF-AM radios, Technisonic TDFM-136 software upgrades, Other issues, and Automated Flight Following.
- Presentation/Handouts: Aviation Issues.ppt, no handouts
- Aviation Multimode radio training: NIICD will make cheat sheets which will be available on the web. Plus we always ship a book out with the radios.

- Automated Flight Following website https://aff.nifc.gov you must get password to see information.

QUESTIONS

- How does the Department of Homeland Security feel about flight following? DHS are the ones who want to know where our planes are.
- Is this the same system that British Columbia uses? Yes. It was different in that they were using a land based system but this year they transitioned to satellites.
- Where is the server that collects all this information? NIFC USFS. Does this mean that BLM can't access the information due to the Cobell Litigation issues? No. There is no software that goes on your pc. It is just a website, therefore, it should not be a problem for BLM.
- Will this tie into the Resource Ordering and Status System (ROSS)? Not sure at this time.
- What will be the cost to dispatch centers for using AFF? There is no cost involved because it is just a website.
- TRAINING 2/17/04 on the Technisonic TDMF-136 for 1 week. 2/18/04 Operator Training.

DUKART

- Topics: Changes to cache equipment starting this fire season, Results of an informal Narrowband/Wideband audio quality test.
- Presentation/Handouts: Cache Equipment & Audio Quality Test1.ppt, no handouts
- Cache Equipment:
  1. The 4330 Remote Transceiver Box will be changed due to age of original model. They look almost the same but will have an external battery connection for longer battery life. The remotes will now come with King VHF and UHF radios which are programmed like the rest of the cache.
  2. The 4312 Command Repeaters are programmed in the narrowband mode.
  3. Since we are now in narrowband, there is a new repeater pair available. This new pair will be used for a C7 command repeater.
  4. Repeaters and links now have are P25 capable modules which are fully transparent. This means that they can pass both digital and analog. Fire will only be using analog mode. Multimode will only be used during special events such as with the DHS.
  5. The newest Daniels modules now require a newer software version. Therefore, they can no longer be programmed in the field with the old version of the software.
  6. All UHF equipment will still be operated in wideband.
  7. We now have new channels plans. They have been programmed into all the cache radios. VHF and UHF each have 4 groups.
- Narrowband/Wideband Test: This was an informal test done here at the NIFC radio shop to see if there was a noticeable difference in audio quality using different repeater/link/radio wideband/narrowband configurations. The equipment configurations are shown in the slide presentation. The result of the test was that we heard no discernable decrease in audio quality using the different narrowband/wideband configurations.

QUESTIONS

- How do you solve the problem of different receive audio levels on a channel between narrowband and wideband traffic? If you set the volume level on a radio receiving wideband traffic narrowband traffic comes in much quieter. So will people constantly have to be adjusting the volume of the radios? There is no radio that can sense if it is receiving narrowband or wideband traffic. The radios need to be tuned such that narrowband and wideband are on different channels. If this is done properly then there is no difference in receive audio levels.
- Who is going to enforce the requirement that cooperators use narrowband radios on BLM frequencies? It is a legal requirement you must enforce it. The new frequencies are licensed to be used in narrowband only.

HILTON

- Topics: Cache radio standards, Training and the Student Career Experience Program (SCEP).
- Presentation/Handouts: Technical Training.ppt, EFJ Config 01-26-04, Racal Config 01-26-04
- See presentation for classes and schedules for 2004. All classes except the fire refresher are full.
- ICS Communications course information may be found at: Geographical Area Training Website: http://www.nationalfiretraining.net or NIICD Training website: http://www.fs.fed.us/fire/niicd
- Handouts covering the RACAL 25 and EFJ 5100 button configuration.
- All group purposes are identified on channel plans included with kits.
- Air Guard has a 110.9 tone on transmit. This is there in case the radio is used in an area where the base station has a tone (i.e. near the Mexican border).
- Journeyman Training: none for 2004
- Student Career Experience Program (SCEP); Students go to school for electronics and work in the cache, then during the summer we detail them out to forests, parks, ect. We currently have 2 students that need permanent placement and 6 that need a summer detail. For information please contact Susan Bleeg 208-387-5857 Susan_bleeg@nifc.blm,gov or sbleeg@fs.fed.us

QUESTIONS

- How large a group do you need to train? Are they users? No. We are focusing on COML/COMTs right now this may change. Each agency was to develop a strategic plan for user training and many of these are still under development. There are cheat sheets available for the radios. The vendors also offer some radio training.
  Federal Fire & Aviation Safety Team has determined a need for a radio training website. Website should be available spring 2004 and will identify P25 radios from cache.
  If you have any more training information please contact Mark Hilton and he can put it on the Hotsheet. Mark_r_hilton@nifc.blm.gov (208)387-5707
- Can't radio training be tied to red card training? We are looking at making it a part of the fire refresher training.
- What about personnel showing up to fires with wideband only radios? Cooperators should have radios that can go into narrowband. The new frequencies we received

this year are licensed narrowband frequencies and cannot be used in wideband. If people show up to fire with radios that do no work in narrowband they are going to be required to turn off their radios and get narrowband radios.

- Are you going to publish the new frequencies? No. The frequencies will not be published and should not be released to the public. Some written guidance needs to be taken on this issue.
- Aren't the users going to be confused because everyone's radios will be configured differently? That may happen but the handouts indicate how they cache radios will be programmed.
- Does NIFC have the fire upgrade on the Thales radios? The fire upgrade is on order.

FIELD GOUP

- The NIFC Field Group had some radios programmed with narrowband and wideband channels and they had a repeater set up so that those who were interested could listen to the audio quality for themselves.

MOULDER

- Topic: National Flight Following Study:
- Presentation/Handouts: National Flight Following Study.ppt, no handouts
- We need to communicate back to the fire community what the results of your study are and how we can improve communications. We need agreement from fire and dispatch about what they want/need.

QUESTION

- How is AFF going to affect the use of these frequencies? This will supplement a voice channel from the aircraft. It should not offset any progress in AFF. There is still a need for a radio especially if you lose web access.

TUOMINEN

- Topic: CDO/COMC Duties and Responsibilities:
- Presentation/Handouts: CDO-COMC_2004.ppt, no handouts
- We have been making some changes in the CDO position. For now Field Operations is overseeing CDO rotation every week. The position is in for classification. There is a meeting scheduled for 1/29/04 to come up with a standby measure if the classification is not done before fire season.

MAVENCAMP

- Topic: Initial Attack Frequencies
- Presentation/Handouts: Initial Attack FM.ppt, no handouts
- AM: FAA has 530 AM frequencies and 9000+ subscribers. We have 50% of their frequencies.
- Going to Washington, DC to talk about IA frequencies. What do they want in a request so we can come up with a better way to make this happen?

TUOMINEN

- Topic: National Hotshot Intra-Crew Frequency Study:
- Presentation/Handouts: Intra-Crew Stusy.ppt, no handouts

- What is it? Evaluate the need for and how they are using an intra-crew frequency. Look at lower power requirements.
- What it is not: Not a test of the Racal radio and not a digital test.
- If this was implemented the crew supervisor would go to COML and asks for a frequency. It's then up to the COML to decide do they really need if. If they do then the COML works with the CDO to see if it is possible. There must be some management of this, there is none now. Crews are using their home frequencies on fires and that must stop.
- **Go back to radio discipline.**

QUESTIONS

- What is an intra-crew frequency and what is it used for? It's a frequency they can use on the ground. Sometimes the crews are getting spread too far apart on the ground and need a way to keep in contact with each other. In monitoring some of the crews it was a chat channel and that is not what it is intended for.
- Are we creating a safety problem by putting them on another channel? No. The crew supervisor is still responsible for monitoring division TAC.

HILTON

- Wrap-up.
- The meeting was followed by meeting with the vendors at the Holiday Inn.